



## SEQUENCE LISTING

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FILIPPOVICH, IGOR VLADIMIROVICH

<120> PLASMIN INHIBITORS FROM THE AUSTRALIAN BROWN SNAKE  
PSEUDONAJA TEXTILIS TEXTILIS

<130> 017227-0193

<140> 09/700,179  
<141> 2001-07-27

<150> PCT/AU99/00343  
<151> 1999-05-07

<150> AU PP3450  
<151> 1999-05-11

<160> 70

<170> PatentIn Ver. 3.3

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Lys Asp Arg Pro Asp Phe Cys Glu Leu Pro Ala Asp Thr Gly Pro Cys  
1 5 10 15  
aga gtc aga ttc cca tcc ttc tac tac aac cca gat gaa aaa aag tgc 96  
Arg Val Arg Phe Pro Ser Phe Tyr Tyr Asn Pro Asp Glu Lys Lys Cys  
20 25 30  
cta gag ttt att tat ggt gga tgc gaa ggg aat gct aac aat ttt atc 144  
Leu Glu Phe Ile Tyr Gly Gly Cys Glu Gly Asn Ala Asn Asn Phe Ile  
35 40 45  
acc aaa gag gaa tgc gaa agc acc tgt gct gcc tga 180  
Thr Lys Glu Glu Cys Glu Ser Thr Cys Ala Ala  
50 55

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             20                    25                    30  
 Leu Glu Phe Ile Tyr Gly Gly Cys Glu Gly Asn Ala Asn Asn Phe Ile  
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 aga gtc aga ttc cca tcc ttc tac tac aac cca gat gaa caa aaa tgc 96  
 Arg Val Arg Phe Pro Ser Phe Tyr Tyr Asn Pro Asp Glu Gln Lys Cys  
             20                    25                    30  
 cta gag ttt att tat ggt gga tgc gaa ggg aat gct aac aat ttt atc 144  
 Leu Glu Phe Ile Tyr Gly Gly Cys Glu Gly Asn Ala Asn Asn Phe Ile  
             35                    40                    45  
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1 5 10 15	
aat gcc aaa atc cca cgc ttc tac tac aac cca cgt caa cat caa tgc	96
Asn Ala Lys Ile Pro Arg Phe Tyr Tyr Asn Pro Arg Gln His Gln Cys	
20 25 30	
ata gag ttt ctc tat ggt gga tgc gga ggg aat gct aac aat ttt aag	144
Ile Glu Phe Leu Tyr Gly Gly Cys Gly Gly Asn Ala Asn Asn Phe Lys	
35 40 45	
acc att aag gaa tgc gaa agc acc tgt gct gca tga	180
Thr Ile Lys Glu Cys Glu Ser Thr Cys Ala Ala	
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35 40 45	

Thr Ile Lys Glu Cys Glu Ser Thr Cys Ala Ala  
 50 55

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 1 5 10 15  
 aaa ggc aac gtc cca cgc ttc tac tac aac gca gat cat cat caa tgc 96  
 Lys Gly Asn Val Pro Arg Phe Tyr Tyr Asn Ala Asp His His Gln Cys  
 20 25 30  
 cta aaa ttt att tat ggt gga tgt gga ggg aat gct aac aat ttt aag 144  
 Leu Lys Phe Ile Tyr Gly Gly Cys Gly Gly Asn Ala Asn Asn Phe Lys  
 35 40 45  
 acc ata gag gaa ggc aaa agc acc tgt gct gcc tga 180  
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 20 25 30  
 Leu Lys Phe Ile Tyr Gly Gly Cys Gly Gly Asn Ala Asn Asn Phe Lys  
 35 40 45  
 Thr Ile Glu Glu Gly Lys Ser Thr Cys Ala Ala  
 50 55

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1

5

10

15

gaa gac ttt acc gga gcc ttc cac tac agc aca cgt gat cgt gaa tgc 96

20

25

30

ata gag ttt att tat ggt gga tgc gga ggg aat gct aac aat ttt atc 144

Ile Glu Phe Ile Tyr Gly Gly Cys Gly Gly Asn Ala Asn Asn Phe Ile

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acc aaa gag gaa tgc gaa agc acc tgt gct gcc tga 180

Thr Lys Glu Glu Cys Glu Ser Thr Cys Ala Ala

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<213> *Pseudonaja textilis*

<400> 10

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1

5

10

15

Glu Asp Phe Thr Gly Ala Phe His Tyr Ser Thr Arg Asp Arg Glu Cys

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Ile Glu Phe Ile Tyr Gly Gly Cys Gly Gly Asn Ala Asn Asn Phe Ile

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Thr Lys Glu Glu Cys Glu Ser Thr Cys Ala Ala

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<210> 11

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Lys Asp Arg Pro Lys Phe Cys Glu Leu Pro Ala Asp Ile Gly Pro Trp
 1             5             10             15

gat gac ttt acc gga gcc ttc cac tac agc cca cgt gaa cat gaa tgc      96
Asp Asp Phe Thr Gly Ala Phe His Tyr Ser Pro Arg Glu His Glu Cys
             20             25             30

ata gag ttt att tat ggt gga tgc aaa ggg aat gct aac aac ttt aat     144
Ile Glu Phe Ile Tyr Gly Gly Cys Lys Gly Asn Ala Asn Asn Phe Asn
             35             40             45

acc caa gag caa tgc gaa agc acc tgt gct gcc tga                      180
Thr Gln Glu Gln Cys Glu Ser Thr Cys Ala Ala
             50             55

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<210> 12

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<400> 12

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Lys Asp Arg Pro Lys Phe Cys Glu Leu Pro Ala Asp Ile Gly Pro Trp
 1             5             10             15

Asp Asp Phe Thr Gly Ala Phe His Tyr Ser Pro Arg Glu His Glu Cys
             20             25             30

Ile Glu Phe Ile Tyr Gly Gly Cys Lys Gly Asn Ala Asn Asn Phe Asn
             35             40             45

Thr Gln Glu Gln Cys Glu Ser Thr Cys Ala Ala
             50             55

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 1             5             10             15

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gag gtg ctg acc ccc gtc tcc agc  
 Glu Val Leu Thr Pro Val Ser Ser  
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72

<210> 14  
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Glu Val Leu Thr Pro Val Ser Ser  
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<210> 15  
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<220>  
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 -20 -15 -10

gag gtg ctg acc ccc gtc tcc agc aag gac cgt ccg gat ttc tgt gaa 96  
 Glu Val Leu Thr Pro Val Ser Ser Lys Asp Arg Pro Asp Phe Cys Glu  
 -5 -1 1 5

ctg cct gct gac acc gga cca tgt aga gtc aga ttc cca tcc ttc tac 144  
 Leu Pro Ala Asp Thr Gly Pro Cys Arg Val Arg Phe Pro Ser Phe Tyr  
 10 15 20

tac aac cca gat gaa aaa aag tgc cta gag ttt att tat ggt gga tgc 192  
 Tyr Asn Pro Asp Glu Lys Lys Cys Leu Glu Phe Ile Tyr Gly Gly Cys  
 25 30 35 40

gaa ggg aat gct aac aat ttt atc acc aaa gag gaa tgc gaa agc acc 240  
 Glu Gly Asn Ala Asn Asn Phe Ile Thr Lys Glu Glu Cys Glu Ser Thr  
 45 50 55

tgt gct gcc tga 252

Cys Ala Ala

<210> 16  
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                     -5                    -1    1                    5  
 Leu Pro Ala Asp Thr Gly Pro Cys Arg Val Arg Phe Pro Ser Phe Tyr  
           10                    15                    20  
 Tyr Asn Pro Asp Glu Lys Lys Cys Leu Glu Phe Ile Tyr Gly Gly Cys  
   25                    30                    35                    40  
 Glu Gly Asn Ala Asn Asn Phe Ile Thr Lys Glu Glu Cys Glu Ser Thr  
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Cys Ala Ala

<210> 17  
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                     -20                    -15                    -10  
 gag gtg ctg acc ccc gtc tcc agc aag gac cgt cca gag ttg tgt gaa 96  
 Glu Val Leu Thr Pro Val Ser Ser Lys Asp Arg Pro Glu Leu Cys Glu  
                     -5                    -1    1                    5  
 ctg cct cct gac acc gga cca tgt aga gtc aga ttc cca tcc ttc tac 144  
 Leu Pro Pro Asp Thr Gly Pro Cys Arg Val Arg Phe Pro Ser Phe Tyr



10	15	20	
tac aac cca gat gaa caa aaa tgc cta gag ttt att tat ggt gga tgc			192
Tyr Asn Pro Asp Glu Gln Lys Cys Leu Glu Phe Ile Tyr Gly Gly Cys			
25	30	35	40
gaa ggg aat gct aac aat ttt atc acc aaa gag gaa tgc gaa agc acc			240
Glu Gly Asn Ala Asn Asn Phe Ile Thr Lys Glu Glu Cys Glu Ser Thr			
	45	50	55
tgt gct gcc tga			252
Cys Ala Ala			

<210> 18  
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<400> 18	
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	-5 -1 1 5
Leu Pro Pro Asp Thr Gly Pro Cys Arg Val Arg Phe Pro Ser Phe Tyr	
	10 15 20
Tyr Asn Pro Asp Glu Gln Lys Cys Leu Glu Phe Ile Tyr Gly Gly Cys	
	25 30 35 40
Glu Gly Asn Ala Asn Asn Phe Ile Thr Lys Glu Glu Cys Glu Ser Thr	
	45 50 55
Cys Ala Ala	

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<400> 19

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      -20                      -15                      -10

gag gtg ctg acc ccc gtc tcc agc aag gac cgt cca aat ttc tgt aaa 96
Glu Val Leu Thr Pro Val Ser Ser Lys Asp Arg Pro Asn Phe Cys Lys
      -5                      -1 1                      5

ctg cct gct gaa acc gga cga tgt aat gcc aaa atc cca cgc ttc tac 144
Leu Pro Ala Glu Thr Gly Arg Cys Asn Ala Lys Ile Pro Arg Phe Tyr
      10                      15                      20

tac aac cca cgt caa cat caa tgc ata gag ttt ctc tat ggt gga tgc 192
Tyr Asn Pro Arg Gln His Gln Cys Ile Glu Phe Leu Tyr Gly Gly Cys
      25                      30                      35                      40

gga ggg aat gct aac aat ttt aag acc att aag gaa tgc gaa agc acc 240
Gly Gly Asn Ala Asn Asn Phe Lys Thr Ile Lys Glu Cys Glu Ser Thr
      45                      50                      55

tgt gct gca tga 252
Cys Ala Ala

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<210> 20
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<213> Pseudonaja textilis

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      -5                      -1 1                      5

Leu Pro Ala Glu Thr Gly Arg Cys Asn Ala Lys Ile Pro Arg Phe Tyr
      10                      15                      20

Tyr Asn Pro Arg Gln His Gln Cys Ile Glu Phe Leu Tyr Gly Gly Cys
      25                      30                      35                      40

Gly Gly Asn Ala Asn Asn Phe Lys Thr Ile Lys Glu Cys Glu Ser Thr
      45                      50                      55

Cys Ala Ala

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-20 -15 -10	
gag gtg ctg acc ccc gtc tcc agc aag gac cat cca aaa ttc tgt gaa	96
Glu Val Leu Thr Pro Val Ser Ser Lys Asp His Pro Lys Phe Cys Glu	
-5 -1 1 5	
ctc cct gct gaa acc gga tca tgt aaa ggc aac gtc cca cgc ttc tac	144
Leu Pro Ala Glu Thr Gly Ser Cys Lys Gly Asn Val Pro Arg Phe Tyr	
10 15 20	
tac aac gca gat cat cat caa tgc cta aaa ttt att tat ggt gga tgt	192
Tyr Asn Ala Asp His His Gln Cys Leu Lys Phe Ile Tyr Gly Gly Cys	
25 30 35 40	
gga ggg aat gct aac aat ttt aag acc ata gag gaa ggc aaa agc acc	240
Gly Gly Asn Ala Asn Asn Phe Lys Thr Ile Glu Glu Gly Lys Ser Thr	
45 50 55	
tgt gct gcc tga	252
Cys Ala Ala	

<210> 22

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<212> PRT

<213> Pseudonaja textilis

<400> 22

Met Ser Ser Gly Gly Leu Leu Leu Leu Leu Gly Leu Leu Thr Leu Trp	
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Glu Val Leu Thr Pro Val Ser Ser Lys Asp His Pro Lys Phe Cys Glu	
-5 -1 1 5	
Leu Pro Ala Glu Thr Gly Ser Cys Lys Gly Asn Val Pro Arg Phe Tyr	
10 15 20	
Tyr Asn Ala Asp His His Gln Cys Leu Lys Phe Ile Tyr Gly Gly Cys	
25 30 35 40	
Gly Gly Asn Ala Asn Asn Phe Lys Thr Ile Glu Glu Gly Lys Ser Thr	
45 50 55	
Cys Ala Ala	

<210> 23  
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                     -20                    -15                    -10

gag gtg ctg acc ccc gtc tcc agc aag gac cgt cca aaa ttc tgt gaa 96  
 Glu Val Leu Thr Pro Val Ser Ser Lys Asp Arg Pro Lys Phe Cys Glu  
                     -5                    -1    1                    5

ctg ctt cct gac acc gga tca tgt gaa gac ttt acc gga gcc ttc cac 144  
 Leu Leu Pro Asp Thr Gly Ser Cys Glu Asp Phe Thr Gly Ala Phe His  
           10                    15                    20

tac agc aca cgt gat cgt gaa tgc ata gag ttt att tat ggt gga tgc 192  
 Tyr Ser Thr Arg Asp Arg Glu Cys Ile Glu Phe Ile Tyr Gly Gly Cys  
   25                    30                    35                    40

gga ggg aat gct aac aat ttt atc acc aaa gag gaa tgc gaa agc acc 240  
 Gly Gly Asn Ala Asn Asn Phe Ile Thr Lys Glu Glu Cys Glu Ser Thr  
                     45                    50                    55

tgt gct gcc tga 252  
 Cys Ala Ala

<210> 24  
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 Met Ser Ser Gly Gly Leu Leu Leu Leu Leu Gly Leu Leu Thr Leu Trp  
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Glu Val Leu Thr Pro Val Ser Ser Lys Asp Arg Pro Lys Phe Cys Glu  
                     -5                    -1    1                    5

Leu Leu Pro Asp Thr Gly Ser Cys Glu Asp Phe Thr Gly Ala Phe His  
     10                    15                    20  
 Tyr Ser Thr Arg Asp Arg Glu Cys Ile Glu Phe Ile Tyr Gly Gly Cys  
     25                    30                    35                    40  
 Gly Gly Asn Ala Asn Asn Phe Ile Thr Lys Glu Glu Cys Glu Ser Thr  
                     45                    50                    55  
 Cys Ala Ala

<210> 25  
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                     -20                    -15                    -10  
 gag gtg ctg acc ccc gtc tcc agc aag gac cgt cca aag ttc tgt gaa 96  
 Glu Val Leu Thr Pro Val Ser Ser Lys Asp Arg Pro Lys Phe Cys Glu  
                     -5                    -1    1                    5  
 ctg cct gct gac atc gga cca tgg gat gac ttt acc gga gcc ttc cac 144  
 Leu Pro Ala Asp Ile Gly Pro Trp Asp Asp Phe Thr Gly Ala Phe His  
     10                    15                    20  
 tac agc cca cgt gaa cat gaa tgc ata gag ttt att tat ggt gga tgc 192  
 Tyr Ser Pro Arg Glu His Glu Cys Ile Glu Phe Ile Tyr Gly Gly Cys  
     25                    30                    35                    40  
 aaa ggg aat gct aac aac ttt aat acc caa gag caa tgc gaa agc acc 240  
 Lys Gly Asn Ala Asn Asn Phe Asn Thr Gln Glu Gln Cys Glu Ser Thr  
                     45                    50                    55  
 tgt gct gcc tga 252  
 Cys Ala Ala

<210> 26

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<400> 26  
 Met Ser Ser Gly Gly Leu Leu Leu Leu Leu Gly Leu Leu Thr Leu Trp  
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 Glu Val Leu Thr Pro Val Ser Ser Lys Asp Arg Pro Lys Phe Cys Glu  
                   -5                  -1  1                  5  
 Leu Pro Ala Asp Ile Gly Pro Trp Asp Asp Phe Thr Gly Ala Phe His  
           10                  15                  20  
 Tyr Ser Pro Arg Glu His Glu Cys Ile Glu Phe Ile Tyr Gly Gly Cys  
   25                  30                  35                  40  
 Lys Gly Asn Ala Asn Asn Phe Asn Thr Gln Glu Gln Cys Glu Ser Thr  
                   45                  50                  55  
 Cys Ala Ala

<210> 27  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Degenerate  
       sense primer

<220>  
 <221> modified\_base  
 <222> (21)  
 <223> A, T, C, G, other or unknown

<400> 27  
 atgaargaya grcchgaryt ngar

24

<210> 28  
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<220>  
 <223> Description of Artificial Sequence: Degenerate  
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<400> 28  
 gtrctytcrt gytctytcy

18

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 <223> Description of Artificial Sequence: Gene-specific  
         forward primer for Txln1  
  
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 atatatggat ccaaggaccg gcctgacttc 30  
  
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 <212> DNA  
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         reverse primer for Txln1  
  
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 aacgggaatt ctcagagcca cacgtgcttt c 31  
  
 <210> 31  
 <211> 32  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Gene-specific  
         reverse primer for Txln2  
  
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 aacgggaatt ctcattgagcc acaggtagac tc 32  
  
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 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: RACE-ready long  
         universal reverse primer  
  
 <400> 32  
 ctaatacgac tcactatagg gcaagcagtg gtaacaacgc agagt 45  
  
 <210> 33  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: RACE-ready  
         short universal reverse primer

<400> 33  
 ctaatacgac tcactatagg gc 22

<210> 34  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: RACE-ready  
         nested universal reverse primer

<400> 34  
 aagcagtgggt aacaacgcag agt 23

<210> 35  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Txln1-gene  
         specific forward primer

<400> 35  
 atcagcggat ccatgtctgg aggt 24

<210> 36  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Txln1  
         gene-specific reverse primer

<400> 36  
 tctcctgaat tctcaggcag cacaggt 27

<210> 37  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Txln-active  
         peptide sequence forward primer



<400> 37  
 attataggat ccaaggaccg tccggat 27

<210> 38  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Gene-specific  
 forward primer for txln2

<400> 38  
 attataggat ccaaggaccg tccagag 27

<210> 39  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Gene-specific  
 forward primer for Txln3

<400> 39  
 aacgtcggat ccaaggaccg tccaaat 27

<210> 40  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Gene-specific  
 forward primer for Txln4

<400> 40  
 aacgtcggat ccaaggacca tccaaaa 27

<210> 41  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Gene-specific  
 forward primer for Txln5

<400> 41  
 aacgtcggat tcaaggaccg tccaaaa 27

<210> 42

<211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Gene-specific  
 forward primer for Txln6

<400> 42  
 attgtcggat ccaaggacct gccaaag 27

<210> 43  
 <211> 408  
 <212> DNA  
 <213> Pseudonaja textilis

<220>  
 <221> CDS  
 <222> (12)..(191)

<220>  
 <221> sig\_peptide  
 <222> (12)..(83)

<220>  
 <221> mat\_peptide  
 <222> (84)..(191)

<400> 43  
 ggagcttcac c atg tct tct gga ggt ctt ctt ctc ctg ctg gga ctc ctc 50  
 Met Ser Ser Gly Gly Leu Leu Leu Leu Leu Gly Leu Leu  
 -20 -15

acc ctc tgg gag gtg ctg acc ccc gtc tcc agc aag gac cgt cca gag 98  
 Thr Leu Trp Glu Val Leu Thr Pro Val Ser Ser Lys Asp Arg Pro Glu  
 -10 -5 -1 1 5

ttg tgt gaa ctg cct cct gac acc gga cca tgt aga gtc aga tcc cca 146  
 Leu Cys Glu Leu Pro Pro Asp Thr Gly Pro Cys Arg Val Arg Ser Pro  
 10 15 20

tcc ttc tac tac aac cca gat gaa caa aaa tgc cta gag ttt att 191  
 Ser Phe Tyr Tyr Asn Pro Asp Glu Gln Lys Cys Leu Glu Phe Ile  
 25 30 35

tatggtggat gcgaagggaa tgctaaccaa ttttatcacc aaagaggaat gcgaaagcac 251

ctgtgctgcc tgaatgagga gaccctcctg gattggatcg acagttccaa cttgacccaa 311

agaccctgct tctgccctgg accaccctgg acacccttcc cccaaacccc accctggact 371

aattcctttt ctctgcaata aagcttttggg tccagct 408

<210> 44  
 <211> 60

<212> PRT

<213> *Pseudonaja textilis*

<400> 44

Met Ser Ser Gly Gly Leu Leu Leu Leu Leu Gly Leu Leu Thr Leu Trp  
                           -20                          -15                          -10

Glu Val Leu Thr Pro Val Ser Ser Lys Asp Arg Pro Glu Leu Cys Glu  
                           -5                          -1  1                          5

Leu Pro Pro Asp Thr Gly Pro Cys Arg Val Arg Ser Pro Ser Phe Tyr  
           10                          15                          20

Tyr Asn Pro Asp Glu Gln Lys Cys Leu Glu Phe Ile  
       25                          30                          35

<210> 45

<211> 59

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Formula  
           peptide

<220>

<221> MOD\_RES

<222> (3)

<223> Lys, Arg, His, Asp, Glu, Gln or Asn; preferably  
           His or Arg

<220>

<221> MOD\_RES

<222> (5)

<223> Lys, Arg, His, Asp, Glu, Gln or Asn; suitably Lys,  
           Asn, Glu or Asp

<220>

<221> MOD\_RES

<222> (6)

<223> Hydrophobic amino acid; preferably Phe or Leu

<220>

<221> MOD\_RES

<222> (8)

<220>

<221> MOD\_RES

<222> (10)

<223> Neutral amino acid, Pro, Ala, Gly, Ser, Thr, Val  
           or Leu; suitably Pro or Leu

<220>

<221> MOD\_RES

<222> (11)

<223> Neutral amino acid, Pro, Ala, Gly, Ser, Thr, Val

or Leu, preferably Pro or Ala

<220>

<221> MOD\_RES

<222> (12)

<223> Lys, Arg, His, Asp, Glu, Gln or Asn, preferably  
Glu or Asp

<220>

<221> MOD\_RES

<222> (13)

<223> Neutral amino acid, Pro, Ala, Gly, Ser, Thr, Val  
or Leu, suitably Thr or Ile

<220>

<221> MOD\_RES

<222> (15)

<223> Any amino acid

<220>

<221> MOD\_RES

<222> (17)

<223> Lys, Arg, His, Asp, Glu, Gln or Asn; suitably Lys,  
Asn, Glu, Asp or Arg

<220>

<221> MOD\_RES

<222> (18)

<223> Any amino acid; preferably Asp, Gly, Ala or Val

<220>

<221> MOD\_RES

<222> (19)

<223> Any amino acid; suitably Phe, Asn, Lys or Arg

<220>

<221> MOD\_RES

<222> (20)

<223> Any amino acid; preferably Thr, Pro, Phe or Ile

<220>

<221> MOD\_RES

<222> (21)

<223> Neutral amino acid, Pro, Ala, Gly, Ser, Thr, Val  
or Leu

<220>

<221> MOD\_RES

<222> (22)

<223> Any amino acid; suitably Ala, Ser or Arg

<220>

<221> MOD\_RES

<222> (24)

<223> Aromatic amino acid; preferably Tyr or His

<220>

<221> MOD\_RES  
 <222> (26)  
 <223> Any amino acid; suitably Ser or Asn  
  
 <220>  
 <221> MOD\_RES  
 <222> (27)  
 <223> Neutral amino acid, Pro, Ala, Gly, Ser, Thr, Val  
 or Leu; preferably Pro, Ala or Thr  
  
 <220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> Lys, Arg, His, Asp, Glu, Gln or Asn  
  
 <220>  
 <221> MOD\_RES  
 <222> (29)  
 <223> Lys, Arg, His, Asp, Glu, Gln or Asn; suitably Glu,  
 Asp, His or Gln  
  
 <220>  
 <221> MOD\_RES  
 <222> (30)  
 <223> Lys, Arg, His, Asp, Glu, Gln or Asn; preferably  
 His, Lys, Arg or Gln  
  
 <220>  
 <221> MOD\_RES  
 <222> (31)  
 <223> Lys, Arg, His, Asp, Glu, Gln or Asn  
  
 <220>  
 <221> MOD\_RES  
 <222> (33)  
 <223> Neutral amino acid, Pro, Ala, Gly, Ser, Thr, Val  
 or Leu; preferably Leu or Ile  
  
 <220>  
 <221> MOD\_RES  
 <222> (34)  
 <223> Lys, Arg, His, Asp, Glu, Gln or Asn; suitably Glu  
 or Lys  
  
 <220>  
 <221> MOD\_RES  
 <222> (36)  
 <223> Neutral amino acid, Pro, Ala, Gly, Ser, Thr, Val  
 or Leu; suitably Leu or Ile  
  
 <220>  
 <221> MOD\_RES  
 <222> (41)  
 <223> Any amino acid; preferably Glu, Gly or Lys  
  
 <220>  
 <221> MOD\_RES

<222> (42)  
 <223> Neutral amino acid, Pro, Ala, Gly, Ser, Thr, Val,  
 Leu or Cys; preferably Gly

<220>  
 <221> MOD\_RES  
 <222> (48)  
 <223> Any amino acid; suitably Lys, Asn or Ile

<220>  
 <221> MOD\_RES  
 <222> (50)  
 <223> Any amino acid; preferably Lys, Gln or Ile

<400> 45  
 Lys Asp Xaa Pro Xaa Xaa Cys Xaa Leu Xaa Xaa Xaa Xaa Gly Xaa Cys  
 1 5 10 15  
 Xaa Xaa Xaa Xaa Xaa Xaa Phe Xaa Tyr Xaa Xaa Xaa Xaa Xaa Xaa Cys  
 20 25 30  
 Xaa Xaa Phe Xaa Tyr Gly Gly Cys Xaa Xaa Asn Ala Asn Asn Phe Xaa  
 35 40 45  
 Thr Xaa Glu Glu Cys Glu Ser Thr Cys Ala Ala  
 50 55

<210> 46  
 <211> 59  
 <212> PRT  
 <213> *Pseudonaja textilis*

<400> 46  
 Lys Asp Arg Pro Asp Phe Cys Glu Leu Pro Ala Asp Thr Gly Pro Cys  
 1 5 10 15  
 Arg Val Arg Phe Pro Ser Phe Tyr Tyr Asn Pro Asp Glx Lys Lys Cys  
 20 25 30  
 Leu Glx Phe Ile Tyr Gly Gly Cys Glu Gly Asn Ala Asn Asn Phe Ile  
 35 40 45  
 Thr Lys Glu Glu Cys Glu Ser Thr Cys Gly Ser  
 50 55

<210> 47  
 <211> 59  
 <212> PRT  
 <213> *Pseudonaja textilis*

<400> 47  
 Lys Asp Arg Pro Glu Leu Cys Glu Leu Pro Pro Asp Thr Gly Pro Cys  
 1 5 10 15  
 Arg Val Arg Phe Pro Ser Phe Tyr Tyr Asn Pro Asp Glu Gln Lys Cys

20                      25                      30

Leu Glu Phe Ile Tyr Gly Gly Cys Glu Glu Asn Ala Asn Ala Phe Ile  
          35                      40                      45

Thr Lys Glu Glu Cys Glu Ser Thr Cys Gly Gly  
      50                      55

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<210> 48
<211> 62
<212> PRT
<213> Unknown Organism
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<220>  
<223> Description of Unknown Organism: Taicotoxin  
associated plasmin inhibitor

```

<400> 48
Lys Asp Arg Pro Lys Phe Cys His Leu Pro Pro Lys Pro Gly Pro Cys
  1          5          10          15
Arg Ala Ala Ile Pro Arg Phe Tyr Tyr Asn Pro His Ser Lys Gln Cys
  20          25          30
Glu Lys Phe Ile Tyr Gly Gly Cys His Gly Asn Ala Asn Lys Phe Lys
  35          40          45
Thr Pro Asp Glu Cys Asn Tyr Thr Cys Leu Gly Val Ser Leu
  50          55          60

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<210> 49  
<211> 58  
<212> PRT  
<213> Unknown Organism

<220>  
<223> Description of Unknown Organism: Aprotinin

```

<400> 49
Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Lys Ala
 1          5          10          15

Arg Ile Ile Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
 20          25          30

Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Ala
 35          40          45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
 50          55

```

<210>	50
<211>	180
<212>	DNA

<213> Pseudonaja textilis

<220>

<221> CDS

<222> (1)..(180)

<220>

<221> modified\_base

<222> (177)

<223> A, T, C or G

<400> 50

atg aag gac cgg cct gat ttt tgt gaa ctg cct gct gac acc gga cca	48
Met Lys Asp Arg Pro Asp Phe Cys Glu Leu Pro Ala Asp Thr Gly Pro	
1 5 10 15	
tgt aga gtc aga ttc cca tcc ttg tac tac aac cca gat gaa aaa aaa	96
Cys Arg Val Arg Phe Pro Ser Leu Tyr Tyr Asn Pro Asp Glu Lys Lys	
20 25 30	
tgc ctc gag ttt att tat ggt gga tgc gaa ggg aat gct aac gat ttt	144
Cys Leu Glu Phe Ile Tyr Gly Gly Cys Glu Gly Asn Ala Asn Asp Phe	
35 40 45	
atg acc aaa gag gag tgt gaa agc acg tgt ggn agt	180
Met Thr Lys Glu Glu Cys Glu Ser Thr Cys Gly Ser	
50 55 60	

<210> 51

<211> 60

<212> PRT

<213> Pseudonaja textilis

<400> 51

Met Lys Asp Arg Pro Asp Phe Cys Glu Leu Pro Ala Asp Thr Gly Pro	
1 5 10 15	
Cys Arg Val Arg Phe Pro Ser Leu Tyr Tyr Asn Pro Asp Glu Lys Lys	
20 25 30	
Cys Leu Glu Phe Ile Tyr Gly Gly Cys Glu Gly Asn Ala Asn Asp Phe	
35 40 45	
Met Thr Lys Glu Glu Cys Glu Ser Thr Cys Gly Ser	
50 55 60	

<210> 52

<211> 180

<212> DNA

<213> Pseudonaja textilis

<220>

<221> CDS

<222> (1)..(180)



<220>  
 <221> modified\_base  
 <222> (177)  
 <223> A, T, C or G

<400> 52  
 atg aag gac cgg cct gag ttg tgt gaa ctg cct cct gac acc gga cca 48  
 Met Lys Asp Arg Pro Glu Leu Cys Glu Leu Pro Pro Asp Thr Gly Pro  
     1                    5                    10                    15  
 tgt aga gtc aga ttc cca tcc ttg tac tac aac cca gat gaa caa aaa 96  
 Cys Arg Val Arg Phe Pro Ser Leu Tyr Tyr Asn Pro Asp Glu Gln Lys  
                     20                    25                    30  
 tgc ctc gag ttt att tat ggt gga tgc gaa gag aat gat aac gct ttt 144  
 Cys Leu Glu Phe Ile Tyr Gly Gly Cys Glu Glu Asn Asp Asn Ala Phe  
             35                    40                    45  
 atg acc aaa gag gag tgt gaa agc acg tgt ccn ggt 180  
 Met Thr Lys Glu Glu Cys Glu Ser Thr Cys Pro Gly  
     50                    55                    60

<210> 53  
 <211> 60  
 <212> PRT  
 <213> Pseudonaja textilis

<400> 53  
 Met Lys Asp Arg Pro Glu Leu Cys Glu Leu Pro Pro Asp Thr Gly Pro  
     1                    5                    10                    15  
 Cys Arg Val Arg Phe Pro Ser Leu Tyr Tyr Asn Pro Asp Glu Gln Lys  
                     20                    25                    30  
 Cys Leu Glu Phe Ile Tyr Gly Gly Cys Glu Glu Asn Asp Asn Ala Phe  
             35                    40                    45  
 Met Thr Lys Glu Glu Cys Glu Ser Thr Cys Pro Gly  
     50                    55                    60

<210> 54  
 <211> 408  
 <212> DNA  
 <213> Pseudonaja textilis

<400> 54  
 ggagcttcat catgtcttct ggaggtcttc ttctcctgct gggactcctc accctctggg 60  
 aggtgctgac cccgtctctc agcaaggacc gtccagagtt gtgtgaactg cctcctgaca 120  
 ccggaccatg tagagtcaga tccccatcct tctactacaa ccagatgaa caaaaatgcc 180  
 tagagtttat ttatggtgga tgcgaaggga atgctaacca attttatcac caaagaggaa 240  
 tgcgaaagca cctgtgctgc ctgaatgagg agaccctcct ggattggatc gacagttcca 300  
 acttgacca aagaccctgc ttctgccttg gaccaccctg gacacccttc ccccaaaccc 360  
 caccctggac taattccttt tctctgcaat aaagctttgg ttccagct 408

<210> 55  
 <211> 83  
 <212> PRT  
 <213> *Pseudonaja textilis*

Met	Ser	Ser	Gly	Gly	Leu	Leu	Leu	Leu	Leu	Gly	Leu	Leu	Thr	Leu	Trp
1				5					10					15	
Glu	Val	Leu	Thr	Pro	Val	Ser	Ser	Lys	Asp	Arg	Pro	Asp	Phe	Cys	Glu
			20					25					30		
Leu	Pro	Ala	Asp	Thr	Gly	Pro	Cys	Arg	Val	Arg	Phe	Pro	Ser	Phe	Tyr
		35					40					45			
Tyr	Asn	Pro	Asp	Glu	Lys	Lys	Cys	Leu	Glu	Phe	Ile	Tyr	Gly	Gly	Cys
	50					55					60				
Glu	Gly	Asn	Ala	Asn	Asn	Phe	Ile	Thr	Lys	Glu	Glu	Cys	Glu	Ser	Thr
65					70					75				80	

Cys Ala Ala

<210> 56  
 <211> 252  
 <212> DNA  
 <213> *Pseudonaja textilis*

<400> 56  
 atgtcttctg gaggtcttct tctcctgctg ggactcctca ccctctggga ggtgctgacc 60  
 cccgtctcca gcaaggaccg tccggatttc tgtgaactgc ctgctgacac cggaccatgt 120  
 agagtcagat tcccatcctt ctactacaac ccagatgaaa aaaagtgcct agagttttatt 180  
 tatggtgat gcaaggaa tgctaacaat tttatcacca aagaggaatg cgaaagcacc 240  
 tgtgctgcct ga 252

<210> 57  
 <211> 83  
 <212> PRT  
 <213> *Pseudonaja textilis*

Met	Ser	Ser	Gly	Gly	Leu	Leu	Leu	Leu	Leu	Gly	Leu	Leu	Thr	Leu	Trp
1				5					10					15	
Glu	Val	Leu	Thr	Pro	Val	Ser	Ser	Lys	Asp	Arg	Pro	Glu	Leu	Cys	Glu
			20					25					30		
Leu	Pro	Pro	Asp	Thr	Gly	Pro	Cys	Arg	Val	Arg	Phe	Pro	Ser	Phe	Tyr
			35				40					45			
Tyr	Asn	Pro	Asp	Glu	Gln	Lys	Cys	Leu	Glu	Phe	Ile	Tyr	Gly	Gly	Cys
	50					55					60				

Glu Gly Asn Ala Asn Asn Phe Ile Thr Lys Glu Glu Cys Glu Ser Thr  
 65 70 75 80

Cys Ala Ala

<210> 58  
 <211> 252  
 <212> DNA  
 <213> *Pseudonaja textilis*

<400> 58  
 atgtcttctg gaggtcttct tctcctgctg ggactcctca ccctctggga ggtgctgacc 60  
 cccgtctcca gcaaggaccg tccagagttg tgtgaactgc ctctgacac cggaccatgt 120  
 agagtcagat tcccatcctt ctactacaac ccagatgaac aaaaatgcct agagttttatt 180  
 tatggtggat gcgaaggga tgctaacaat tttatcacca aagaggaatg cgaaagcacc 240  
 tgtgctgcct ga 252

<210> 59  
 <211> 83  
 <212> PRT  
 <213> *Pseudonaja textilis*

<400> 59  
 Met Ser Ser Gly Gly Leu Leu Leu Leu Leu Gly Leu Leu Thr Leu Trp  
 1 5 10 15  
 Glu Val Leu Thr Pro Val Ser Ser Lys Asp Arg Pro Asn Phe Cys Lys  
 20 25 30  
 Leu Pro Ala Glu Thr Gly Arg Cys Asn Ala Lys Ile Pro Arg Phe Tyr  
 35 40 45  
 Tyr Asn Pro Arg Gln His Gln Cys Ile Glu Phe Leu Tyr Gly Gly Cys  
 Gly Gly Asn Ala Asn Asn Phe Lys Thr Ile Lys Glu Cys Glu Ser Thr  
 65 70 75 80

Cys Ala Ala

<210> 60  
 <211> 252  
 <212> DNA  
 <213> *Pseudonaja textilis*

<400> 60  
 atgtcttctg gaggtcttct tctcctgctg ggactcctca ccctctggga ggtgctgacc 60  
 cccgtctcca gcaaggaccg tccaaatttc tgtaaaactgc ctgctgaaac cggacgatgt 120  
 aatgccaaaa tccacgctt ctactacaac ccacgtcaac atcaatgcat agagttttctc 180  
 tatggtggat gcggagggaa tgctaacaat ttttaagacca ttaaggaatg cgaaagcacc 240  
 tgtgctgcat ga 252

<210> 61  
 <211> 83  
 <212> PRT  
 <213> Pseudonaja textilis

<400> 61  
 Met Ser Ser Gly Gly Leu Leu Leu Leu Leu Gly Leu Leu Thr Leu Trp  
           1                  5                  10                  15  
 Glu Val Leu Thr Pro Val Ser Ser Lys Asp His Pro Lys Phe Cys Glu  
                   20                  25                  30  
 Leu Pro Ala Asp Thr Gly Ser Cys Lys Gly Asn Pro Val Arg Phe Tyr  
                   35                  40                  45  
 Tyr Asn Ala Asp His His Gln Cys Leu Lys Phe Ile Tyr Gly Gly Cys  
           50                  55                  60  
 Gly Gly Asn Ala Asn Asn Phe Lys Thr Ile Glu Glu Cys Lys Ser Thr  
           65                  70                  75                  80  
 Cys Ala Ala

<210> 62  
 <211> 252  
 <212> DNA  
 <213> Pseudonaja textilis

<400> 62  
 atgtcttctg gaggtcttct tctcctgctg ggactcctca ccctctggga ggtgctgacc 60  
 cccgtctcca gcaaggacca tccaaaattc tgtgaactcc ctgctgaaac cggatcatgt 120  
 aaaggcaacg tcccacgctt ctactacaac gcagatcatc atcaatgcct aaaatttatt 180  
 tatggtggat gtggaggga tgctaacaat tttaagacca tagaggaagg caaaagcacc 240  
 tgtgctgcct ga 252

<210> 63  
 <211> 83  
 <212> PRT  
 <213> Pseudonaja textilis

<400> 63  
 Met Ser Ser Gly Gly Leu Leu Leu Leu Leu Gly Leu Leu Thr Leu Trp  
           1                  5                  10                  15  
 Glu Val Leu Thr Pro Val Ser Ser Lys Asp Arg Pro Lys Phe Cys Glu  
                   20                  25                  30  
 Leu Leu Pro Asp Thr Gly Ser Cys Glu Asp Phe Thr Gly Ala Phe His  
                   35                  40                  45  
 Tyr Ser Thr Arg Asp Arg Glu Cys Ile Glu Phe Ile Tyr Gly Gly Cys  
           50                  55                  60  
 Gly Cys Asn Ala Asn Asn Phe Ile Thr Lys Glu Glu Cys Glu Ser Thr

65

70

75

80

Cys Ala Ala

&lt;210&gt; 64

&lt;211&gt; 252

&lt;212&gt; DNA

<213> *Pseudonaja textilis*

&lt;400&gt; 64

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atgtcttctg gaggtcttct tctcctgctg ggactcctca ccctctggga ggtgctgacc 60
cccgctctcca gcaaggaccg tccaaaattc tgtgaactgc ttcctgacac cggatcatgt 120
gaagacttta ccggagcctt ccactacagc acacgtgatc gtgaatgcat agagtttatt 180
tatggtggat gcggagggaa tgctaacaat tttatcacca aagaggaatg cgaaagcacc 240
tgtgctgcct ga                                     252

```

&lt;210&gt; 65

&lt;211&gt; 83

&lt;212&gt; PRT

<213> *Pseudonaja textilis*

&lt;400&gt; 65

```

Met Ser Ser Gly Gly Leu Leu Leu Leu Leu Gly Leu Leu Thr Leu Trp
  1              5              10              15

Glu Val Leu Thr Pro Val Ser Ser Lys Asp Arg Pro Lys Phe Cys Glu
              20              25              30

Leu Pro Ala Asp Ile Gly Pro Cys Asp Asp Phe Thr Gly Ala Phe His
              35              40              45

Tyr Ser Pro Arg Glu His Glu Cys Ile Glu Phe Ile Tyr Gly Gly Cys
  50              55              60

Lys Gly Asn Ala Asn Asn Phe Asn Thr Gln Glu Glu Cys Glu Ser Thr
  65              70              75              80

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Cys Ala Ala

&lt;210&gt; 66

&lt;211&gt; 252

&lt;212&gt; DNA

<213> *Pseudonaja textilis*

&lt;400&gt; 66

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atgtcttctg gaggtcttct tctcctgctg ggactcctca ccctctggga ggtgctgacc 60
cccgctctcca gcaaggaccg tccaaagttc tgtgaactgc ctgctgacat cggaccatgg 120
gatgacttta ccggagcctt ccactacagc ccacgtgaac atgaatgcat agagtttatt 180
tatggtggat gcaaagggaa tgctaacaac tttaatacc aagagcaatg cgaaagcacc 240
tgtgctgcct ga                                     252

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<210> 67  
 <211> 59  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Formula  
 peptide

<220>  
 <221> MOD\_RES  
 <222> (3)  
 <223> Lys, Arg, His, Asp, Glu, Gln or Asn

<220>  
 <221> MOD\_RES  
 <222> (5)  
 <223> Lys, Arg, His, Asp, Glu, Gln or Asn

<220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> Hydrophobic amino acid

<220>  
 <221> MOD\_RES  
 <222> (8)

<220>  
 <221> MOD\_RES  
 <222> (10)..(11)  
 <223> Neutral amino acid, Pro, Ala, Gly, Ser, Thr, Val  
 or Leu

<220>  
 <221> MOD\_RES  
 <222> (12)  
 <223> Lys, Arg, His, Asp, Glu, Gln or Asn

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 or Leu

<220>  
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 as filed

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 as filed

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 Xaa Xaa Xaa Xaa Xaa Xaa Phe Xaa Tyr Xaa Xaa Xaa Xaa Xaa Xaa Cys  
                   20                  25                  30  
 Xaa Xaa Phe Xaa Tyr Gly Gly Cys Xaa Xaa Asn Ala Asn Asn Phe Xaa  
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 Thr Xaa Glu Glu Cys Glu Ser Thr Cys Ala Ala  
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<400> 69

Asn Ala Asn Asn Phe

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<400> 70

Tyr Gly Gly Cys

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